

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/796,578	BAKER, CLARK R.	
	Examiner	Art Unit	
	Carol S. Tsai	2857	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/21/05.
2. ☒ The allowed claim(s) is/are 1, 3-5, 7, 9-12, 14-18, now renumbered as 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>10/03/2005</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1, 3-5, 7, 9-12, 14-18 are allowed.

2. The following is an examiner's statement of reasons for allowance:

U. S. Patent No. 4,960,1126 to Conlon et al. in view of U. S. Patent No. 4,407,290 to Wilber and U. S. Publication 2002/0151812 to Scheiner et al. are references closest to the claimed invention. Conlon et al. in combination with Wilber and Scheiner et al. disclose a method for processing signals in a pulse oximeter to determine oxygen saturation and pulse rate, comprising: receiving waveforms corresponding to two different wavelengths of light from a patient; ensemble averaging said waveforms in a first ensemble averager; calculating a pulse rate based on an output of said first ensemble averager; normalizing said waveforms to produce normalized waveforms; ensemble averaging said normalized waveforms in a second ensemble averager; and calculating an oxygen saturation based on an output of said second ensemble averager. However, Conlon et al. in combination with Wilber and Scheiner et al. do not teach Said ensemble averaging using variable weights; selecting first metrics for said first ensemble averager to optimize said calculating a pulse rate; and selecting second metrics for said second ensemble averager to optimize said calculating an oxygen saturation; and including all of the other limitations in the respective independent claims.

U. S. Patent No. 4,960,1126 to Conlon et al. in view of U. S. Patent No. 4,407,290 to Wilber, U. S. Publication 2002/0151812 to Scheiner et al., and U. S. Patent No. 6,035,223 to Baker, Jr. are references closest to the claimed invention. Conlon et al. in combination with Wilber and Scheiner et al. disclose a method for processing signals in a pulse oximeter to

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determine oxygen saturation and pulse rate, comprising: receiving waveforms corresponding to two different wavelengths of light from a patient; ensemble averaging said waveforms in a first ensemble averager; calculating a pulse rate based on an output of said ensemble averager; normalizing said waveforms to produce normalized waveforms; ensemble averaging normalized waveforms in a second ensemble averager; and calculating an oxygen saturation based on an output of said second ensemble averager. Baker, Jr. in combination with Wilber disclose a method for processing signals in a pulse oximeter to determine oxygen saturation and pulse rate, comprising: receiving waveforms corresponding to two different wavelengths of light from a patient; low pass filtering said waveforms in a first low pass filter; calculating a pulse rate based on an output of said first low pass filter; normalizing said waveforms to produce normalized waveforms; low pass filtering said normalized waveforms in a second low pass filter; and calculating an oxygen saturation based on an output of said second low pass filter. However, Conlon et al. in combination with Wilber, Scheiner et al., and Baker, Jr. do not teach a method for processing signals in a pulse oximeter to determine oxygen saturation and pulse rate, comprising: receiving waveforms corresponding to two different wavelengths of light from a patient; low pass filtering and ensemble averaging said waveforms in a first low pass filter and ensemble averager; calculating a pulse rate based on an output of said first low pass filter and ensemble averager; normalizing said waveforms to produce normalized waveforms; low pass filtering and ensemble averaging said normalized waveforms in a second low pass filter and ensemble averager; and calculating an oxygen saturation based on an output of said second low pass filter and ensemble average.; and including all of the other limitations in the respective independent claims.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Contact Information*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

cswt  
November 21, 2005



Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857